

Claims 1-20 (canceled).

21. (new) An electrosurgical instrument for selectively providing RF power to operate as main modes both a monopolar handpiece and a bipolar handpiece each in multiple sub-modes including CUT, and HEMO sub-modes, comprising:

- (a) a console unit,
- (b) RF power generating circuitry inside the console and capable of generating electrosurgical currents at a given carrier frequency in the MHz range,
- (c) first electrical connectors at the console for receiving a monopolar handpiece,
- (d) second electrical connectors at the console for receiving a bipolar handpiece,
- (e) circuit means for generating first and second different modulation waveforms representing, respectively, the CUT, and HEMO sub-modes,
- f) first means for delivering the first waveform representing the CUT sub-mode to the RF power generating circuitry for modulating the given carrier frequency to produce CUT sub-mode electrosurgical currents,
- g) second means for delivering the second waveform representing the HEMO sub-mode to the RF power generating circuitry for modulating the given carrier frequency to produce HEMO sub-mode electrosurgical currents,
- h) third means for supplying both the CUT and HEMO sub-mode electrosurgical currents to the first electrical connectors,
- i) fourth means for supplying both the CUT and HEMO electrosurgical currents to the second electrical connectors,
- j) whereby both a monopolar handpiece and a bipolar handpiece can be operated at the given frequency in both the CUT and HEMO sub-modes.

22. (new) An electrosurgical instrument according to claim 21, further comprising footswitches and third electrical connectors at a side of the console for connection to the footswitches, said footswitches functioning to turn on and off the RF power generating circuitry.

23. (new) An electrosurgical instrument according to claim 21, wherein the circuit means further comprises means for generating a third different modulation waveform representing the CUT-COAG sub-mode, further comprising fifth means for delivering the third waveform

representing the CUT-COAG sub-mode to the RF power generating circuitry for modulating the given carrier frequency to produce CUT-COAG sub-mode electrosurgical currents, the third and fourth means being configured to supply also the CUT-COAG sub-mode electrosurgical currents to both the first and second electrical connectors, whereby both a monopolar handpiece and a bipolar handpiece can be operated at the given frequency in the same CUT, CUT-COAG, and HEMO sub-modes.

24. (new) An electrosurgical instrument according to claim 23, wherein the given frequency is in the range of about 4 MHz.

25. (new) An electrosurgical instrument according to claim 22, further comprising separate plural footswitches, and wherein said monopolar handpiece comprises a fingerswitch, said fingerswitch and one of said footswitches functioning to turn on and off the RF power generating circuitry for the monopolar handpiece, another of said footswitches functioning to turn on and off the RF power generating circuitry for the bipolar handpiece.

26. (new) An electrosurgical instrument according to claim 25, further comprising means for preventing both the footswitch for the bipolar handpiece and the fingerswitch and footswitch for the unipolar handpiece to cause simultaneous supply of electrosurgical currents at both the first and second connectors.

27. (new) An electrosurgical instrument according to claim 21, wherein the console unit comprises separate sub-mode selection switches and separate power control switches for each of the monopolar and bipolar handpieces.

28. (new) An electrosurgical instrument according to claim 27, further comprising a voltage regulator having a reference voltage and outputting an operating voltage to the RF power generating circuitry, the voltage regulator including feedback means to vary its outputted operating voltage such that the average power output remains substantially the same for the different sub-modes of operation.

29. (new) An electrosurgical instrument according to claim 27, further comprising independent means in response to the selection of an operating sub-mode and a power level to vary an operating voltage supplied to the RF power generating circuitry, the independent means being separate for each of the main monopolar and bipolar modes.

30. (new) An electrosurgical instrument according to claim 29 wherein the voltage regulator is a voltage switching regulator, and the feedback means includes a voltage divider.

31. (new) An electrosurgical instrument according to claim 30, wherein the operating sub-modes include the CUT, CUT/COAG, and HEMO modes which each generate modulating waveforms whose average voltage decreases when going from the CUT to the CUT/COAG, and from the CUT/COAG to the HEMO sub-modes, the voltage regulator functioning to boost the operating voltage to the RF power generating circuitry in response to a selected waveform having a lower average voltage.

32. (new) An electrosurgical instrument for selectively providing RF power to operate as main modes both a monopolar handpiece and a bipolar handpiece each in multiple sub-modes including first, second, and third different CUT, CUT/COAG, and HEMO sub-modes, comprising:

(a) a console unit,

(b) RF power generating circuitry inside the console and capable of generating electrosurgical currents at a given frequency in the 4 MHz range,

(c) first means for generating modulated waveforms representative of the different multiple sub-modes and supplying the modulated waveforms to the RF power generating circuitry, the selection of a sub-mode having a tendency to vary the output power from the RF power generating circuitry,

(d) first electrical connectors at the console for receiving a monopolar handpiece,

(e) second electrical connectors at the console for receiving a bipolar handpiece,

(f) second means for controlling the output power of the electrosurgical currents to a maximum level and for supplying the controlled electrosurgical currents at the given frequency in any of the first, second, or third sub-modes to the first electrical connectors for operating in the main monopolar mode,

(g) third means for controlling the output power of the electrosurgical currents to substantially the same maximum level and for supplying the controlled electrosurgical currents at the given frequency in any of the first, second, or third sub-modes to the second electrical connectors for operating in the main bipolar mode,

(h) the second and third means functioning independently in response to selecting the main mode, the first, second, or third sub-mode, and the output power,

(i) whereby all three sub-modes are capable of being supplied to both the monopolar and bipolar handpieces when carrying out their respective procedures.

33. (new) An electrosurgical instrument according to claim 32, wherein the second and third means comprises a voltage switching regulator employing feedback to control its output voltage and means for varying the feedback independently for each of the main modes in response to selecting the sub-mode, or the output power.

34. (new) An electrosurgical instrument according to claim 33, wherein the feedback comprises a voltage divider network configured such that substantially the same maximum output power is produced irrespective of selecting the first, second, or third sub-modes.

35. (new) A method for treating patients with electrosurgical currents from a unitary electrosurgical instrument for selectively providing RF power to operate a monopolar handpiece and a bipolar handpiece each in three separate sub-modes, comprising the steps:

(a) operating the electrosurgical instrument to generate electrosurgical currents in any one of the sub-modes at a single frequency in the 4 MHz range in a procedure for modulating tissue of the patient using a monopolar handpiece,

(b) operating the electrosurgical instrument to generate electrosurgical currents in any one of the same three sub-modes at the same frequency in the 4 MHz range in a procedure for modulating tissue of the patient using a bipolar handpiece.

36. (new) The method of claim 35, wherein the electrosurgical instrument is capable of generating electrosurgical currents in the CUT, CUT/COAG, and HEMO sub-modes, and all three sub-modes are capable of being supplied to both the monopolar and bipolar handpieces when carrying out their respective procedures.

37. (new) The method of claim 36, further comprising using independent power controls for each of the sub-modes, and operating the electrosurgical instrument such that the maximum output power is substantially the same irrespective of whether the CUT, CUT/COAG, or HEMO sub-mode is selected.